Severe Weather in Arkansas 2006

Return Address:

National Weather Service
8400 Remount Road
North Little Rock, AR 72118-2203

PRINTED WEATHER INFORMATION -- PLEASE FORWARD TO APPROPRIATE DEPARTMENTS OR PERSONNEL

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National Weather Service
Little Rock, Arkansas

Slight (SLGT) risk

For the first day of the forecast:

- a 15%, 30% or 45% chance of large hail, a 15% or 30% chance of damaging winds, and/or a 5% or 10% chance of tornadoes.

For the second day of the forecast:

- a 15%, 30% or 45% chance of any severe weather.

Moderate (MDT) risk

For the first day of the forecast:

- a 45% or 60% chance of large hail, a 45% or 60% chance of damaging winds, and/or a 15% chance of tornadoes.

For the second day of the forecast:

- a 45% or 60% chance of any type of severe weather.

High (HIGH) risk

For the first day of the forecast:

- a 60% chance of damaging winds and/or a 30%, 45% or 60% chance of tornadoes.

For the second day of the forecast:

- a 60% chance of any type of severe weather.

Note: Higher % values imply a greater concern of significant severe weather.

Roll cloud - A low, horizontal, tube-shaped cloud associated with a thunderstorm gust front. Roll clouds are completely detached from the base of the thunderstorm and appear to be "rolling" about a horizontal axis. They are NOT horizontal funnel clouds.

Rope - A narrow, often contorted funnel associated with the decaying stage of a tornado.

Scud - The common name for stratus fractus clouds. They are small, ragged, low cloud fragments that are usually not attached to a larger cloud base (such as the base of a thunderstorm). They are often seen with and behind cold fronts and thunderstorm gust fronts. These clouds do not produce severe weather. When they are near, or attached to the base of the thunderstorm, they can be mistaken for funnel clouds.

Severe thunderstorm - A thunderstorm with winds of 58 mph (50 knots) or more, or hail 3/4 inch in diameter or larger. Structural damage may imply the occurrence of a severe thunderstorm. Hail and wind are the two elements for classifying a thunderstorm as severe; lightning and flooding rains are elements of the thunderstorm itself.

SPC - The Storm Prediction Center in Norman, OK; formerly known as the National Severe Storms Forecast Center or SELS. SPC issues convective outlooks and all severe thunderstorm and tornado watches for the lower 48 states.

Squall line - A solid or nearly solid line or band of thunderstorms.

Severe Weather in Arkansas 2006

Arkansas Governor Mike Huckabee has joined the National Weather Service (NWS) and the Arkansas Department of Emergency Management (ADEM) to urge the citizens of Arkansas to prepare for the upcoming severe weather season.

The Governor has proclaimed **February 20-24, 2006** as “Severe Weather Awareness Week” in Arkansas.

Governor Huckabee is encouraging citizens to use this week to review severe weather safety rules...and to understand the hazards associated with severe thunderstorms.

Important!

For those who wish to hold a tornado drill, you may want to time your drill to coincide with the weekly NOAA Weather Radio All Hazards test. During Severe Weather Awareness Week, a test will occur between 11:00 am and 12:00 pm on Wednesday, February 22, 2006.**

During this week, the NWS will transmit severe weather safety information on NOAA Weather Radio All Hazards (NWR). You can also get information about severe weather on the internet.

The Little Rock NWS office has a site on the internet! This brochure will be found at the following address:

http://www.srh.noaa.gov/lzk/html/svr.htm

** If there is bad weather, the alternate date for the weekly test will be Thursday, February 23, 2006 between 11:00 am and 12:00 pm.

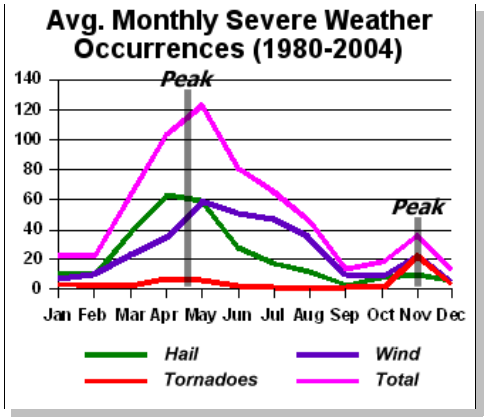
Derecho - A widespread and usually fast-moving windstorm associated with convection. Derechos include any family of downburst clusters and can produce damaging thunderstorm winds over areas hundreds of miles long and more than 100 miles across.
Downburst - A strong downdraft resulting in an outward burst of damaging winds on or near the ground. Downburst winds can produce damage similar to a tornado.
Downdraft - A small-scale column of air that rapidly sinks toward the ground, usually accompanied by precipitation as in a shower or thunderstorm.
Dry line - A boundary separating moist and dry air masses. It is an important factor in severe weather frequency in the Great Plains. It typically lies north-south across the central and southern High Plains during the spring and early summer, where it separates moist air from the Gulf of Mexico and dry desert air from the southwestern states. The dry line typically advances eastward during the afternoon and retreats westward at night. However, a strong storm system can sweep the dryline eastward into the Mississippi Valley, or even farther east, regardless of the time of day.

Fujita Scale (or **F-Scale**) **-** A scale of wind damage intensity in which wind speeds are inferred from an analysis of wind damage. All tornadoes, and most other severe local wind storms, are assigned a single number from the scale according to the most intense damage caused by the storm.

F0 (weak): 40-72 mph, light damage
F1 (weak): 73-112 mph, moderate damage
F2 (strong): 113-157 mph, considerable damage
F3 (strong): 158-206 mph, severe damage
F4 (violent): 207-260 mph, devastating damage
F5 (violent): 261-318 mph, (rare) incredible damage

Funnel cloud - A funnel extending from the base of a towering cumulus or cumulonimbus cloud, associated with a rotating column of air that is NOT in contact with the ground. The terms funnel cloud and tornado are NOT interchangeable.
Gust front - The leading edge of gusty surface winds from thunderstorm downdrafts. Passage of the gust front is usually marked by cool, gusty winds. The gust front often precedes the precipitation by several minutes.
Gustnado - A short-lived vortex (rotation) near the ground and not attached to the base of a convective cloud. They often develop along a gust front. They are classified as thunderstorm wind events.
Hook echo - A radar pattern characterized by a hook-shaped (or figure 6-shaped) extension of a thunderstorm echo, usually in the southwest part of the storm. A hook is often associated with a mesocyclone, and indicates favorable conditions for tornado development.
Instability - The tendency for air parcels to accelerate when they are displaced from their original position; the greater the instability, the greater the potential for severe thunderstorms.

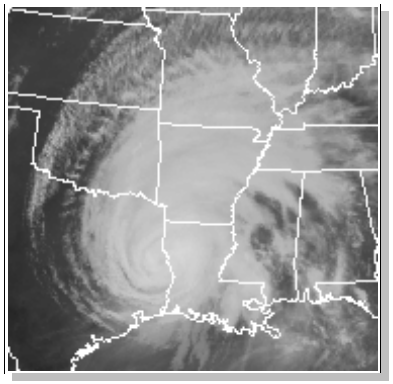
Spring is supposed to be the most active period for severe weather in Arkansas. In fact, according to statistics from 1980 to 2004...there was an average of 21 tornadoes through May of each year (in a 124 nautical mile radius of the North Little Rock radar site). There were only 12 tornadoes the remainder of each year.



Through May of 2005, there were only 4 tornadoes statewide...and this total carried through the Summer months. While there is usually a minor peak of severe weather in the Fall, it looked to be a slow year for tornadoes overall. That did not turn out to be the case.

In the picture: Average monthly severe weather occurrences (1980-2004) according to the Storm Prediction Center in Norman, OK.

On September 24th, Hurricane Rita hit the Gulf Coast near the Texas/Louisiana line...and then moved inland. North and east of Rita, 15 tornadoes (mostly weak) were spawned from central into southeast Arkansas.

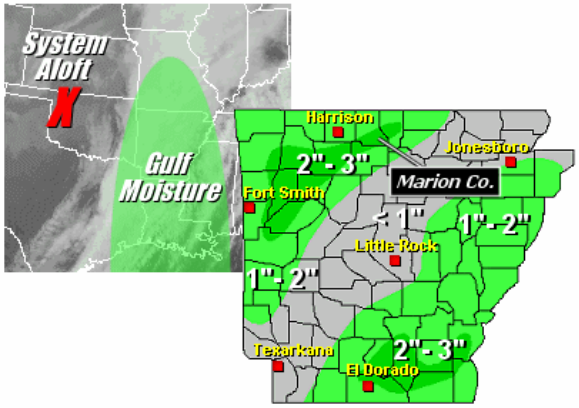


In the picture: The satellite showed the remnants of Hurricane Rita moving toward Arkansas on 09/24/2005.

Flash Floods

There was one death due to flash flooding in Arkansas in 2005.

An elderly woman lost her life at Rush (Marion Co.) when she attempted to cross Rush Creek on foot during a flash flood. This was the first flash flood fatality of 2005 in the nation.



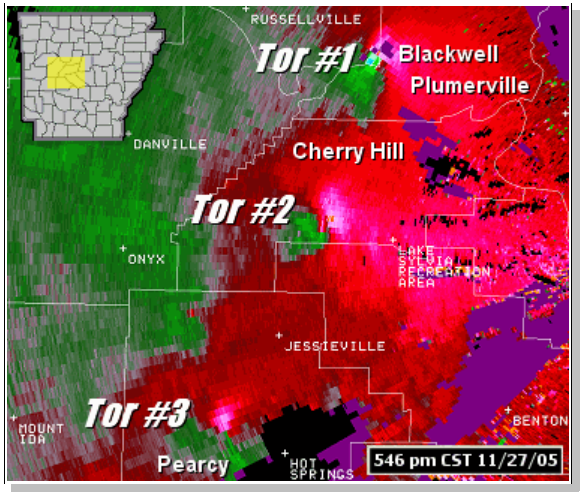
In the picture: A storm system dredged up a lot of moisture from the Gulf of Mexico on 01/12/2005. This led to 2 to 3 inches of rain (and locally more) in parts of Arkansas... including Marion County. Flash flooding was reported countywide.

Lightning

There were no deaths but one injury due to lightning in 2005.

The injury occurred at Fort Smith (Sebastian Co.).

Heading into November, the tornado tally for the year thus far was 19. By the end of the month, that number would jump to 50...due mostly to a large tornado outbreak on the 27th. On that day, two dozen tornadoes were spawned...the largest outbreak in over two years (since May 16, 2003).



In the picture: The WSR-88D (Doppler Weather Radar) showed areas of strong rotation with tornadoes produced on 11/27/2005. Tor #1 tracked through Blackwell (Conway County), Tor #2 hit Cherry Hill (Perry County) and Plumerville (Conway County) and Tor #3 affected areas near Pearcy (Garland County).

Two of the three strongest tornadoes of 2005 were spawned during the outbreak...and were rated F3 (158-206 mph winds) on the Fujita Scale. The tornadoes tracked through portions of Conway and Perry Counties, with 1 fatality reported. The fatality occurred near Plumerville (Conway County) when one of the tornadoes crossed Interstate 40 and overturned a vehicle.

Two more tornadoes followed to begin December (on the 3rd)...for a grand total of 52 tornadoes for the year!

From the hurricanes to the drought to the tornadoes, it will be hard to forget the Fall of 2005. So much happened and so many lives were affected. A repeat performance is not likely to occur any time soon...if you believe the statistics.

45. 3.7 miles northeast of Greenbrier to 2.5 miles east-southeast of Guy (Faulkner Co.), November 27th, 7:11 PM – A weak (F0) tornado had a path length of 4 miles.

46. 9 miles southeast of Bee Branch to 5.5 miles north-northwest of Pearson (Van Buren and Cleburne Cos.), November 27th, 7:19 PM – A strong (F2) tornado had a path length of 10 miles. One person was injured.

47. 3 miles east-southeast of Prim to 3.1 miles east of Prim (Cleburne Co.), November 27th, 7:47 PM – A weak (F0) tornado had a path length of 1.2 miles.

48. 2.3 miles east-northeast of Franklin to 2.3 miles northeast of Saddle (Izard, Sharp, and Fulton Cos.), November 27th, 7:55 PM – A weak (F1) tornado had a path length of 15.8 miles.

In the picture: A pontoon boat was overturned by a weak (F1) tornado on Crown Lake near Horseshoe Bend (Izard County) on 11/27/2005.

49. 3.6 miles west of Marcella to 2.7 miles northeast of St. James (Stone Co.), November 27th, 8:05 PM – A strong (F2) tornado had a path length of 7 miles.

50. 0.7 mile south of Pangburn to 1.3 miles east-northeast of Pangburn (White Co.), November 27th, 8:44 PM – A weak (F1) tornado had a path length of 2 miles.

51. 1.5 miles east-southeast of Woodberry to 3 miles north-northeast of Hampton (Calhoun Co.), December 3rd, 10:18 PM – A weak (F1) tornado had a path length of 2.7 miles.

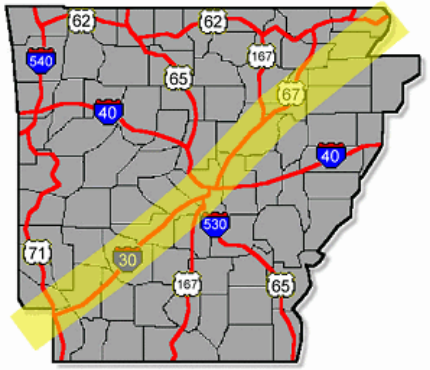
52. 5.7 miles northeast of Monticello to 8 miles east-northeast of Monticello (Drew Co.), December 3rd, 11:03 PM – A weak (F0) tornado had a path length of 2.7 miles.

Thunderstorm (Straight-Line) Winds

No fatalities were caused by thunderstorm winds in 2005.

However, two people were injured. The injuries occurred at Centerton (Benton Co.) and Texarkana (Miller Co.).

in past years...and people just became complacent. Recent large tornado outbreaks (such as on January 21, 1999 and March 1, 1997) followed the I-30 and US 67/167 corridors from Texarkana to Little Rock and Newport.



In the picture: Where recent tornado outbreaks have been noted in Arkansas (prior to November 27, 2005).

The event on November 27th was situated northwest of the usual location...with some residents remarking that destructive tornadoes had bypassed their areas for over 25 years.

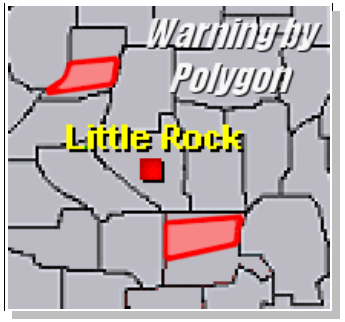
Other residents had the misconception that they were protected by the rolling terrain north and west of Little Rock. Since this assumption held true during recent outbreaks, the tornadoes on November 27th probably defied logic and surprised some people.

One other thing to consider is the "cry wolf" element of past warnings. For years, the National Weather Service issued warnings for entire counties...which many times included parts of counties not affected by storms. People living in these areas may have become somewhat immune to warnings...and got used to nothing happening.

By the way, warnings are now posted only for areas expected to have severe weather.

"Warning by Polygon" more accurately expresses where severe weather is expected...with the target area usually much smaller than a whole county. For polygon information (when warnings are in effect), go to:

http://www.srh.noaa.gov/ridge/



In the picture: "Warning by Polygon".

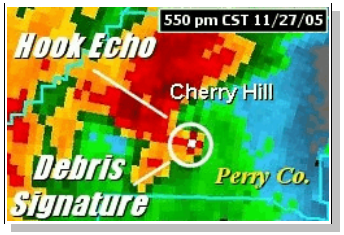
34. 4 miles northwest of Jessieville to 15 miles west-northwest of Paron (Garland and Saline Cos.), November 27th, 5:30 PM – A weak (F1) tornado had a path length of 8.2 miles.

35. 9 miles west-southwest of Morrilton to 2.5 miles northeast of St. Vincent (Conway Co., Pope Co., and then back into Conway Co.), November 27th, 5:37 PM – A strong (F2) tornado had a path length of 18 miles.

In the picture: A strong (F2) tornado heavily damaged a liquor store in Blackwell (Conway County) on 11/27/2005.

36. 11 miles southwest of Thornburg to 1.5 miles southeast of Opello (Perry and Conway Cos.), November 27th, 5:41 PM – A strong (F3) tornado had a path length of 21 miles.

In the picture: The WSR-88D (Doppler Weather Radar) indicated a hook echo approaching Cherry Hill (Perry County) from the southwest around 550 pm CST on 11/27/2005. To sample the storm, the radar sends energy...which is reflected back if there is precipitation. In this case, the radar detected a high level of reflectivity in the hook, which often means that debris is present.



37. 2.5 miles southeast of Morrilton to 1 mile east of Springfield (Conway Co.), November 27th, 6:09 PM – A strong (F3) tornado had a path length of 15 miles. One person was killed and eight others were injured. The death and seven of the injuries occurred when the tornado overturned a vehicle on Interstate 40 about one mile west of Plumerville.

In the picture: Vehicles were thrown like toys by a strong (F3) tornado about 2 miles southeast of Morrilton (Conway County) on 11/27/2005.

By the way, flash flooding and lightning are more deadly than tornadoes...and are a thunderstorm's number 1 and 2 killers respectively.

Time To Become Aware

What about thunderstorm straight-line winds and hail? People have been caught off-guard by both, and have been injured (sometimes fatally). The question is, how do you avoid being surprised by bad weather?

Education: Understanding what you are up against is the key to knowing how to handle it. Learning about bad weather will help you defend yourself against it. There is a very good on-line weather school ("Jetstream") that will guide you. Go to:

http://www.srh.weather.gov/srh/jetstream

JETSTREAM
AN ONLINE WEATHER SCHOOL

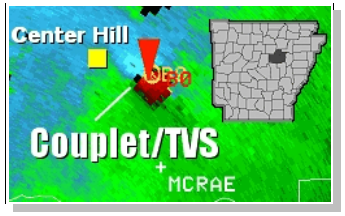
Source of Weather Information: Once you are educated on the finer points of bad weather, it is nice to know when you will have to face it. The National Weather Service offers a product called the Hazardous Weather Outlook (HWO). The HWO is geared toward forecasting inclement conditions...sometimes several days in advance. To get the latest HWO, go to:

http://www.srh.noaa.gov/lzk/cgi-bin/wxs3.php?pil=HWO

For warning information, the National Weather Service broadcasts warnings on NOAA Weather Radio (more on page 12). Warnings are also disseminated on local television, cable television and commercial radio stations as well as pagers, PDAs and cell phones.

Responsibility: Before severe weather arrives, you must take responsibility for your safety. Find a place for you and your family to hide, and keep a source of weather information close by. A good rule of thumb is to put as many walls between yourself and the outdoors as you can (more on page 11).

16. 5 miles southeast of Center Hill to 4 miles northwest of Center Hill (White Co.), September 24th, 7:33 PM – A strong (F2) tornado had a path length of 9 miles. This tornado was associated with Tropical Depression Rita.



In the picture: The WSR-88D (Doppler Weather Radar) indicated adjacent inbound (blue colors) and outbound (red colors) winds along with a Tornadic Vortex Signature (TVS) between Searcy (White County) and Center Hill (White County) on 09/24/2005. These are signs that a tornado might be present, with a Tornado Warning issued for the area by the National Weather Service.

17. 3 miles southeast of Hopewell to 2.4 miles southeast of Hopewell (Cleburne Co.), September 24th, 7:55 PM – A weak (F0) tornado had a path length of 0.6 mile. This tornado was associated with Tropical Depression Rita.

18. 2.6 miles northwest of Pearson to 3.3 miles northwest of Pearson (Cleburne Co.), September 24th, 8:05 PM – A weak (F1) tornado had a path length of 0.7 mile. This tornado was associated with Tropical Depression Rita.

19. 8.3 miles southeast of DeLuce to 2.2 miles east-southeast of DeLuce (Arkansas Co.), September 24th, 9:21 PM – A weak (F1) tornado had a path length of 7 miles. This tornado was associated with Tropical Depression Rita.

20. 3.1 miles east of Moko to 4.7 miles northeast of Camp (Fulton Co.), November 5th, 9:59 PM – A weak (F1) tornado had a path length of 5.4 miles. One person was injured.

21. 1 mile southwest of Sitka to 4 miles east-northeast of Sitka (Sharp Co.), November 5th, 10:41 PM – A strong (F2) tornado had a path length of 4.8 miles. Three people were injured.

In the picture: A strong (F2) tornado downed a tree through a house 3 to 4 miles east-northeast of Sitka (Sharp County) on 11/05/2005.

22. 1.5 miles northeast of Potter to 1.8 miles southwest of Mena (Polk Co.), November 12th, 10:27 PM – A weak (F0) tornado had a path length of 3.5 miles.

If a severe weather warning has been issued for your area, you may have only minutes to find a safe place to hide. Where should you go?

If a home has been hit by a severe thunderstorm, the roof is usually the first to go. Winds produced by the storm (or by a tornado) start by ripping shingles away, then parts of the roof. If the winds are strong enough, the whole roof may be torn off.

In the picture: Textbook damage associated with a strong (F2) tornado. The roof of a home was torn apart near Center Hill (White County) on 09/24/2005...with the outer walls bulging outward.

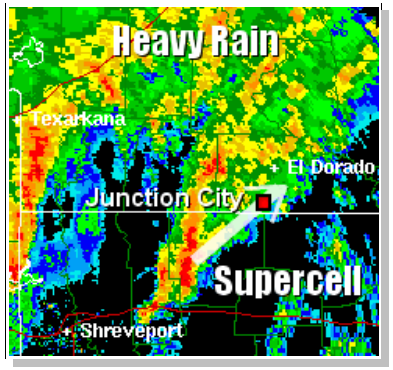
After the roof, the outer walls are affected. Walls usually bulge outward until they finally give way. In many cases, the storm is gone by the time winds can affect inner walls and rooms.

Given the facts, you should head to the lowest floor and to an interior room. Put as many walls between yourself and the outdoors as you can. In most cases, this advice will protect you and your family.

This advice only pertains to those in homes/buildings on a permanent foundation. Dwellings not on permanent foundations (such as mobile homes) can be pushed over by strong winds. These dwellings should be abandoned in times of severe weather.

Where Tornadoes Occurred

1. Junction City to 3 miles northeast of Lawson (Union Co.), January 12th, 11:25 PM – A strong (F3) tornado had a path length of 24 miles. Two people were killed and 13 others were injured. The fatalities were the first tornado deaths of 2005 in the nation. The deaths occurred in mobile homes.



In the picture: The WSR-88D (i.e. Doppler Weather Radar) in Shreveport, LA showed a supercell (i.e. storm with rotating updrafts) in northern Louisiana during the late evening hours of 01/12/2005. There was nothing around the storm at the time, so it had nothing to compete with (for available energy). The storm became tornadic as it tracked toward southern Arkansas.

2. Marie to Osceola (Mississippi Co.), March 22nd, 5:38 PM – A weak (F0) tornado had a path length of 8 miles.

3. 2 miles north of Ozark (Franklin Co.), April 11th, 4:10 PM – A weak (F0) tornado had a path length of 0.1 mile.

4. 3 miles southwest of Dardanelle to 1.7 miles west-southwest of Dardanelle (Yell Co.), April 11th, 6:45 PM – A weak (F0) tornado had a path length of 2.1 miles.

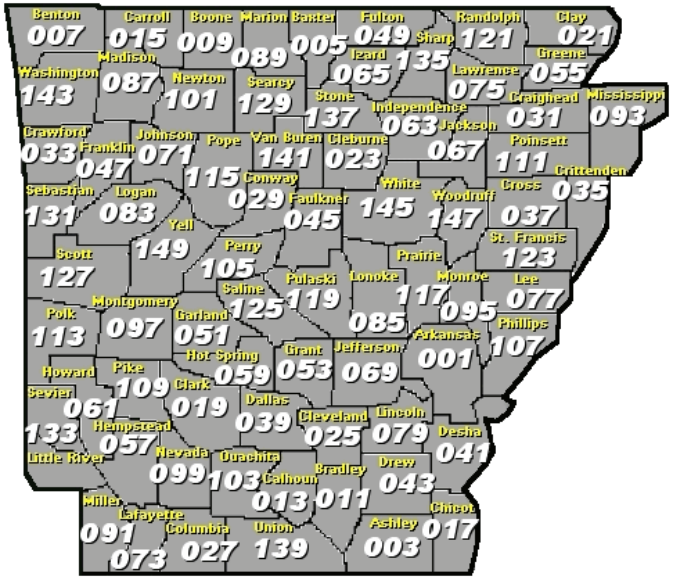
5. 2 miles north-northeast of Hamburg to Fountain Hill (Ashley Co.), September 24th, 12:40 PM – A weak (F1) tornado had a path length of 7 miles. This tornado was associated with Tropical Depression Rita. (Rita had been a hurricane previously, but had been downgraded to a tropical depression by the time it reached Arkansas.)

6. 7 miles north of Eudora (Chicot Co.), September 24th, 12:51 PM – A weak (F1) tornado had a path length of 1 mile. This tornado was associated with Tropical Depression Rita.

7. 3.5 miles south-southwest of Lacey to 6.6 miles west of Lacey (Drew Co.), September 24th, 12:54 PM – A weak (F1) tornado had a path length of 4.8 miles. This tornado was associated with Tropical Depression Rita.

8. 6 miles north-northwest of Arkansas City to 4 miles northwest of Kelso (Desha Co.), September 24th, 2:45 PM – A weak (F0) tornado had a path length of 11 miles. This tornado was associated with Tropical Depression Rita.

alerted for severe weather in your area. **Example:** Pulaski County would be “005119.”



In the picture: Federal Information Processing System (FIPS) codes for counties in Arkansas.